

PRiDe II NEWSLETTER

AUGUST 2022

OUR RICE OUR PRIDE



Interview with the Head of Cereals Program, NaCRRRI - Towards rice development in Uganda



Dr. Lamo checking rice condition in the research field



Dr. Lamo explaining rice varieties in the 2nd JICA Chair at Makerere University

JICA through PRiDe collaborates with NaCRRRI and target research institutes; 6 ZARDIs (Abi, Buginyanya, Bulindi, Mukono, Ngetta, and Rwebitaba) and NaSARRI to improve capacity of research and development of appropriate rice production technologies for productivity improvement.

The Cereals (Rice and maize) program in NaCRRRI led by Dr. Jimmy Lamo (Plant Breeder) shared some of his views on rice research in Uganda as follows;

A brief history of Rice Research in Uganda

Rice was introduced to Uganda in about 1904 as a milled product for consumption. Later, the Indians introduced rice cultivars which were aromatic and began growing under rain fed lowland conditions.

With support from the International Fund for Agricultural Development (IFAD), the Agricultural Development Project (ADP) released the first upland rice variety "IRAT 112" in 1995. Key outputs of the project were the release of three rice varieties "ITA 257", "ITA 325" and "NERICA-4" released as "NARIC-1", "NARIC-2" and "NERICA-4", respectively. NERICA-4 is the first New Rice for Africa (NERICA) released in Uganda. Based on this circumstance, Uganda initiated breeding program in 2004 with support from Alliance for a Green Revolution in Africa (AGRA), International Rice Research Institute (IRRI), AfricaRice and JICA.

What is the farmers' feedback towards adopting rice varieties released in Uganda?

Since 2004, 8 upland rice varieties, 7 irrigated rice and 4 rain fed lowland rice have been released.

Upland varieties: The year 2004 when the JICA funded

rice project was launched, varieties NARIC-1, NARIC-2 and NERICA-4 had just been released. Among the 3 varieties, NERICA-4 occupied 78% of the cropped area in the country (Lamo et al 2008). Reasons for preference of NERICA-4 were high yield, wide adaptation in the country, high milling recovery and moderate maturity period of the variety.

Irrigated varieties: JICA along with NARO evaluated and released 5 rice varieties targeting irrigated rice production areas. Of these 5, variety WITA-9 is the most widely grown. Reasons for the wide adoption includes high tolerance to Rice Yellow Mottle Virus and high yield.

Rain-fed lowland varieties: Rain-fed lowland varieties NARORICE-1, NARORICE-2, NARORICE-3, and NARORICE-4 were released in 2021. NARORICE-1 is widely grown in Mubuku, Olweny and Doho Irrigation Schemes. In Olweny, it covers 50% of the cropped 500 acres.

What do you expect from JICA for strengthening the research ability of rice in Uganda? And what can be done as NARO?

In research institutes such as NaCRRRI, NaSARRI and ZARDIs, rice researchers and technicians are growing through close collaboration with JICA. My expectation is that JICA visibility will be broadened for fostering more rice researchers. National Agricultural Research Organization (NARO) also needs to recruit and retain the staff that are working on various project including JICA projects and provide more support in rice research. In addition, NARO should support the production of higher quality seeds using the MUSOMESA extension training model. And finally, Regional Rice Research and Training Centre (RRRTC) built in NaCRRRI, through a grant project from the government of Japan, needs to be utilized fully for improving rice research in the country.

Preliminary National Performance Trials 2022A

Rice Yellow Mottle Virus (RYMV) is one of the major rice production constraints in Uganda causing 30 – 100% yield loss depending on its incidence.

To date, a number of rice varieties have been released in Uganda. In 2014 five varieties; Komboka, GSR 0057 (Okile), IR09A-136 (Agoro), NERICA 6, and WITA 9, and in 2021 two more varieties; NARORICE 1 (PR 107), NARORICE 2 (MET 12). Among these, there are some highly susceptible to RYMV leaving room for introduction of more tolerant varieties against this disease.

PRiDe project has been proceeding with breeding activities for RYMV tolerant variety (PRIDE1) through a cross between two moderately resistant varieties (NERICA 4 and WITA 9). The Project is currently working on yield survey of pre-NPT of the 2022 A season which two new trial sites; Tochi irrigation scheme and Kamenyamigo station were added, and KAF39, KAF40 and AR73 were included as tested variety.

Performance of these 3 varieties and PRIDE1, and 3 registered varieties of WITA9, Okile and NERICA6 will be compared. The result of the survey will be ready within September.



Harvesting in the NPT field at Ngetta ZARDI

Progress of the Musomesa Field School Activities

With the end of season 2022A in the lowland sites in Eastern and Northern Uganda, a total of three hundred and eleven (311) farmers have graduated from the Musomesa Field School. The farmer graduates attended the seasonal long trainings; site selection, nursery bed making/sowing, transplanting, gap filling and basal fertiliser application, top dressing, monitoring & evaluation, and post-harvest handling.

Harvesting is the last training at MFS and farmers are trained how to identify the characteristics of a mature rice plant and then the recommended ways of harvesting. Farmers also learn post-harvest handling practices which includes threshing using wooden thresher and motorized thresher, drying harvested seed and storage.

During the graduation ceremonies, PRiDe provides each farmer group with a wooden thresher to help them in the post-harvest handling.

The graduation ceremony in each district was graced by District officials such as District Agricultural Officers and the graduating farmers were handed certificates from them. They are now authentic "Rice Musomesa" and they will disseminate the improved rice cultivation techniques in their communities.



(Top)
MFS Graduated farmers in Ikumbya S/C Luuka District



(Middle)
MFS Graduated farmers in Bumanya S/C Kaliro District



(Bottom)
MFS Graduated farmers in Kigandalo S/C Mayuge District

The farmers are thankful to the MFS approach as it is a hands-on training and this has boosted their confidence to take on rice cultivation.

In the upland rice area, within the Rwebitaba, Bulindi, Abi and Ngetta ZARDI zones, the MFS activities are progressing steadily and training of sowing seeds was done at all sites. The farmers participating in the MFS (upland rice area) were each provided with 5kg pure rice seed for planting in their gardens. This enables the farmers to practice and adopt the learnt technologies to their own gardens. If PRiDe II, Agricultural Officers, and ZARDI researchers recognize that farmers adopt improved rice cultivation technologies in their gardens, the gardens are certified as "MFS Baby Demo Field".

During the sowing activity, farmer groups are provided with planting forks to plant in lines. PRiDe II transfers the techniques to MFS participants how to use the fork for making beautiful lines leading to increase of rice yield.

28th National Agricultural Show in Jinja

PRiDe II and NaCRRRI participated in the agricultural exhibitions in Jinja to share the improved rice cultivation techniques i.e., line planting, use of proper timing and amount of fertilizer, and to introduce agricultural machines and tools that PRiDe II and NaCRRRI developed; motorized thresher, rotary weeder and planting fork among others. The agricultural show was held from 5th – 14th August and well attended by government dignitaries, farmers and students.

The exhibition helps to target more farmers who did not join the MFS training. The agricultural exhibition is a great opportunity to empower farmers with improved rice cultivation techniques.

The farmers were happy with the post-harvest equipment showcased and the different rice varieties for the different ecologies towards better rice production and productivity.

PRiDe staff - Mr. Tendo explains to the Minister of State for Agriculture Hon Kyakulaga Fred (2nd from the left) how the rotary weeder works



PRiDe staff - Mr. Tendo explains how to make "Pop Rice" with the pop rice machine



New JICA Expert



A new JICA Expert who is in charge of CARD Regional Training, Ms. Rieko Kamioka joined PRiDe II on 22nd August. Actually, she was a JICA volunteer at NaCRRRI 3 years ago, so most project staff remember her and it is easy for us to start working together. Having said that, there is a big difference of work between JICA volunteer and JICA Expert. She will learn various important tasks to manage the Project with other experts.

